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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,948	12/12/2003	Jong Kil	A03P1079	3699
36802	7590	04/30/2007	EXAMINER	
PACESETTER, INC. 15900 VALLEY VIEW COURT SYLMAR, CA 91392-9221			HOLMES, REX R	
			ART UNIT	PAPER NUMBER
			3762	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/30/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/735,948	KIL ET AL.
	Examiner	Art Unit
	Rex Holmes	3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 July 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-2 and 9-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 3 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Response to Arguments***

1. Applicant's arguments filed 7/26/06 have been fully considered but they are not persuasive. Applicant argues that Hedberg's synthesized signal is does not concatenate the signals. Hedberg discloses a device that sums two or more signals. This summing of signals is a joining or linking of signals and thus fits the applicants admission of concatenation as disclosed by the Applicant on page 9, line 8 of his remarks filed on 7/26/06. The rejection of claims 1-2 and 9-16 stand.

### ***Election/Restrictions***

2. Newly submitted claim 3 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The applicant elected group 1, in the response dated 7/26/06. The invention of group 1, is directed to a method for emulating a surface EKG that does not require the use of two sensing channels for different chambers, one in the atrium and one in the ventricle, as disclosed in the restriction requirement dated 5/4/06. Claim 3 is drawn to a method for emulating a surface EKG using two sensing circuits that do not require implanted electrodes or selectively concatenating.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 3 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2 and 9-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroll et al. (U.S. Pat. 6,813,850 hereinafter "Kroll").

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. Regarding claims 1-2, 14-16, Kroll discloses a system for emulating a surface EKG using an implantable device (ABSTRACT). Kroll also discloses that it converts the internal signals that it receives from the electrodes into an emulated surface EKG (Col. 11, II. 4-9). Kroll further discloses that it senses atrial and ventricular signals (Col. 8, II. 50-56). Kroll further discloses that the device or an external device can perform the emulation (Col. 4 II. 44-47).

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6. Regarding claims 9-10, Kroll discloses sensing in unipolar for both atrial and ventricular signals (Col. 9, ll. 29-33). Kroll further discloses an atrial ring and tip electrode, a ventricular tip and ring electrode and a SVC and RV Coil electrode (Fig. 2).

7. Regarding claims 11-12, Kroll discloses that the signals can be filtered separately or together to form a combined surface EKG signal (Col. 4, ll. 47-56). Kroll further discloses that a switch that is selectively controlled determines sensing polarity and thus the signal polarity (Col. 10, ll. 48-52):

8. Regarding claim 13, Kroll discloses using the emulated EKG to control the delivery of therapy for the device (Col. 5, ll. 9-12).

9. Claims 1-2, 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedberg et al (U.S. 5740811).

10. Referring to claims 1, 2, and 15-16, Hedberg et al. teach a method and apparatus that comprises an implantable cardiac stimulation device having an atrial and ventricular electrode and sensing atrial and ventricular signals. The signals are combined and a surface ECG is obtained in an extracorporeal signal processing device (see column 2, lines 55-67 and column 3, lines 1-5 and column 4, lines 40-49 and figure 1). While Hedberg et al. do not explicitly state that the device and method concatenate the atrial and ventricular signals, the Examiner is considering the definition of concatenating to be the joining of two strings or linking together. Regarding claim 9, Hedberg et al. teach sensing atrial and ventricular signals using unipolar sensing by employing the electrodes in combination with the housing of the device (see column 4, lines 40-49). With regards to claim 10, Hedberg et al. teach a right atrial tip electrode

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and a right ventricular tip electrode (see figure 1 and column 4, lines 40-42 and lines 52-53). With reference to claim 11, Hedberg et al. teach that local noise is filtered out of the signals (see column 5, lines 27-29 and lines 46-48), and referring to claim 12, Hedberg et al. teach combining by addition signals received from different electrodes (see column 6, lines 54-57). Regarding claim 13, also teaches using the emulated EKG to adjust parameters controlling the implant (see column 2, lines 13-22). Regarding claim 14, Hedberg et al. teach that the components that generate the synthesized ECG can be completely contained within an implantable unit (see column 2, lines 65-67 and column 3, line 1).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rex Holmes whose telephone number is 571-272-8827. The examiner can normally be reached on M-F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Rex Holmes  
Examiner  
Art Unit 3762

George Evanisko  
Primary Examiner  
Art Unit 3762

4/26/17